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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,924	09/26/2005	James Alexander Sharpe	920602-97830	6623
23644 7590 12/30/2010 BARNES & THORNBURG LLP P.O. Box 2786 CHICAGO, IL 60690-2786			EXAMINER NGUYEN, THONG Q	
			ART UNIT 2872	PAPER NUMBER
			NOTIFICATION DATE 12/30/2010	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Patent-ch@btlaw.com

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/522,924	SHARPE, JAMES ALEXANDER	
	<b>Examiner</b>	<b>Art Unit</b>	
	Thong Nguyen	2872	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 August 2010 and 18 October 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 January 2005 and 04 August 2010 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-940)   | Paper No(s)/Mail Date _____                                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/4/10</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Response to amendment***

1. The present Office action is made in response to the amendments filed on 8/4/10 and 10/18/10.
2. It is noted that in the amendment of 8/4/10, applicant has made changes to the specification, the drawings and the claims. It is also noted that in the Remarks, applicant has submitted a statement that the substitute specification filed on 4/20/10 does not contain any new matter. Regarding to the claims, applicant has amended claims 1, 3-5 and 8-9 and canceled claim 10. There is not any claim being added into the application. As a result of the changes to the claims, the application now contains claims 1-9. Note that claims 11-12 were canceled in the pre-amendment of 1/25/05.
3. In the amendment filed on 10/18/10, applicant has corrected the deficiencies in the specification of the amendment filed on 8/4/10. There is not any change to the claims in comparison to the amended claims listed in the amendment of 8/4/10.
4. It is noted that the amendments to the claims as provided in the amendments of 8/4/10 and 10/18/10 fail to comply with the rule 37 CFR 1.121 because applicant has failed to provide markings to show the change(s) to the claim.

*In particular, the term "the" appeared before the terms "scanning movement" in original claim 1, line 4, is missing without any explanation in the amended claim 1, line 5. See list of claims provided in each of the amendment of 8/4/10 and 10/18/10.*

In the spirit co-operation, the amendments to the claims as provided in the amendment of 8/4/10 and 10/18/10 have been entered. However, applicant should take

into account the instructions as provided in the rule of 37CFR 1.121 for making any changes to the application from now on.

***Drawings***

5. The replacement sheet contained corrected figure 3 was received on 8/4/10. The replacement sheet is approved by the examiner. As a result of the changes to the drawings, the application now contains three sheets of figures 1, 6a-6d, 7a-7c and 8-12 as filed on 1/25/2005, and one replacement sheet contained figures 2a-2b and 3-5 as filed on 8/4/10.

6. The objection to the drawings as set forth in the Office action of 6/9/10 has been overcome by the amendment to the drawings as provided in the amendment of 8/4/10.

***Specification***

7. The substitute specification filed on 4/20/2010 has been entered.

8. The lengthy specification which was amended by the amendment of 10/18/10 has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

9. The objections to the specification as set forth in the Office action of 6/9/10 have been overcome by the amendment to the specification as provided in the amendment of 10/18/10.

***Claim Rejections - 35 USC § 112***

10. The rejections of claims 1-9 under 35 U.S.C. 112 as set forth in the Office action of 6/9/10 have been overcome by the amendment to the claims as provided in the amendment of 8/4/10.

***Claim Objections***

11. The objections to claims 3-5 as set forth in the Office action of 6/9/10 have been overcome by the amendment to the claims as provided in the amendment of 8/4/10.

***Claim Rejections - 35 USC § 102***

12. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

13. Claims 1-4, 6-7 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsutomu et al (of record).

Tsutomu et al disclose an optical projection tomography apparatus. The apparatus as described in pages 275-276 and shown in figs 1 and 4 comprises the following features: a) a stage (11) supporting a specimen (S) wherein the stage is able to rotate via a mechanism (9, 10) to bring different sections of the specimen to be illuminated; b) an illuminating system comprises a laser (1) for emitting light to illuminate the sample; c) a scanning means including a deflection mirror (13) and a scanning mirror (14) for scanning the light emitted from the laser onto the sample; d) an optical system (3) disposed on the downstream of the light passed through the sample wherein the optical system comprises at least one convex lens, see figure 13 or figure 15 which shows that the optical

system (3) comprises at least one biconvex lens; e) a detector (4) disposed on the downstream of the optical system (3) for receiving onto the straight traveling light transmitted through the specimen (S) and focused by the optical system (3). It is noted that the detector (4) as shown in fig. 4 is a linear array of individual detecting elements arranged side-by-side with respect to each other so that when the light is transmitted through the specimen, the particular detecting element which is disposed on the axis of the incident light is a localized detecting element which detects a straight traveling light and the detecting elements disposed on sides of the mentioned particular detecting element detect scattered and/or refracted light. Regarding to the feature related to the positions of the specimen as recited in present claims 6 and 7, such feature is readable from the structure of the apparatus provided by Tsutomu et al. In particular, the mechanism is operated under the control signaled outputted from the data processing device having a three-dimensional calculating unit (8), thus, the rotational positions of the stage are indexed with respect to the raster scanning of the mirror (14) for the purpose of reconstruction a three-dimensional image of the sample.

***Claim Rejections - 35 USC § 103***

14. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
15. Claims 5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsutomu et al (of record).

The optical projection tomography apparatus as described in pages 275-277 and shown in figs. 1 and 4 does not disclose that the detector (4) is a two-dimensional array of detectors as recited in present claim 5. However, the use of a two-dimensional array of detector as claimed is merely that of a preferred embodiment and no criticality has been disclosed. The support for that conclusion is found in the present specification in which applicant has disclosed that the detector can be a linear array of detector. The non-criticality of the type of detector as claimed can be seen in present claim 3 which clearly claims that the detector is a linear array of detector. Further, the use of a detector having an array of detecting elements which arrange in a linear array of a two-dimensional array is disclosed by Tsutomu et al as can be seen in page 277 and shown in fig. 7. Thus, absent any showing of criticality, it would have been obvious to one skilled in the art at the time the invention was made to modify the detector in the form of a linear array of detecting elements in the optical projection tomography apparatus as provided by Tsutomu et al as described in the embodiment shown in fig. 4 by a detector in the form of a two-dimensional array of detecting elements as suggested by the same inventor as shown in fig. 7 for the purpose of meeting a particular application.

Regarding to the feature that the scanning means is a part of a confocal scanning microscope as claimed in present claim 8, such feature would have been obvious to one skilled in the art to utilize the optical projection tomography

apparatus having a scanning means (13, 14) in a microscope for the purpose of observation a sample.

***Response to Arguments***

16. Applicant's arguments as provided in the amendments of 8/4/10 (Note that the arguments as provided in the amendment of 10/18/10 are repeated those provided in the amendment of 8/4/10) have been fully considered but they are not persuasive.

A) Regarding to the rejections of claims 1-4, 6-7 and 9 under 35 U.S.C. 102(b) as being anticipated by Tsutomu et al (Japanese reference No. 4-122248), applicant's arguments as provided in the amendment of 8/4/10, pages 10-11, have been fully considered but they are not persuasive for the following reasons.

First, it is noted that applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Second, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., improved signal to noise ratio, avoid the complex arrangement of a multitude of directional optical devices,...) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).



Third, regarding to applicant's arguments that the device provided by Tsutomu et al does not disclose the feature that the optical system is operative throughout scanning movement of light on a specimen, only light which exits the specimen and which is parallel to the incident light is directed onto the detector. The examiner respectfully disagrees with the applicant and respectfully invited the applicant to review the device claimed and the art of Tsutomu et al. *As stated by Tsutomu et al in pages 275-276 and shown in figs. 1 and 4, the optical system (3) allows only light transmitted through the specimen to a detector element only if the light passed through the optical system (3) enters the optical system (3) in a direction parallel to the optical axis of the optical device. The light passed through the sample and entered a particular optical system (3) is parallel to at least one light from the bundle of light emitted/scanned and incident onto the specimen. For instance, a scanned light directly incident on the specimen passes through the specimen and enters the optical system disposed on the light path of the light passed through the specimen, thus that optical element is operative throughout scanning movement of light on a specimen, to receive only light which exits the specimen and which is parallel to the incident light. Applicant should note that the claims do not recite any specific structural arrangement of the so-called "optical system" and the detector to make the device claimed differ from those of the applied art.*

B) Regarding to the rejections of 5 and 8 under 35 U.S.C. 103(a) as being unpatentable over Tsutomu et al, it is noted that since applicant has not provided any specific arguments, thus the claims are still rejected for the same reasons as set forth in the Office action of 6/9/10 and now repeated in this Office action.

***Conclusion***

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Nguyen whose telephone number is (571) 272-2316. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone B. Allen can be reached on (571) 272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2872

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thong Nguyen/

Primary Examiner, Art Unit 2872